

Gentianine Datasheet

4th Edition (Revised in July, 2016)

[Product Information]

Name: Gentianine

Catalog No.: CFN98674

Cas No.: 439-89-4

Purity: > 95%

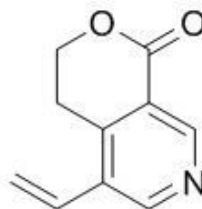
M.F: C₁₀H₉NO₂

M.W: 175.2

Physical Description: Powder

Synonyms: 5-Ethenyl-3,4-dihydro-1H-pyrano[3,4-c]pyridin-1-one;

3,4-Dihydro-5-vinyl-1H-pyrano[3,4-c]pyridin-1-one.



[Intended Use]

1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[Source]

The herbs of *Trigonella foenum-graecum* L.

[Biological Activity or Inhibitors]

Gentianine is an active metabolite of swertiamarin that possesses a pharmacophoric moiety; swertiamarin treatment has no significant effect on adipogenesis, or the mRNA expression of PPAR- γ and GLUT-4, however, there is a significant increase in the mRNA expression of adiponectin, on the other hand, treatment with gentianine can significantly increase adipogenesis, which is associated with a significant increase in the mRNA expression of PPAR- γ , GLUT-4 and adiponectin; suggest that the anti-diabetic effect of swertiamarin is due to gentianine, an active metabolite of swertiamarin.^[1]

Gentianine has potential anti-inflammatory action, the action may be at least partly based on the suppressed production of tumor necrosis factor-alpha (TNF-alpha) and interleukin (IL)-6.^[2]

Gentianine has antipsychotic activity.^[3]

Gentianine has hypotensive effect, it can produce a decrease in heart rate and systolic, diastolic and mean arterial blood pressure. ^[4]

Gentianine has a protective effect on hippocampal CA1 neurons in rats subjected to recurrent febrile convulsion (FC), it can ameliorate FC-induced neuronal injury by enhancing glutamate acid decarboxylase activity, decreasing glutamate levels and increasing γ -aminobutyric acid levels.^[5]

Gentianine has diuretic activity, it could be developed as a safe antihypertensive drug.^[6]

[Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[HPLC Method]^[7]

Mobile phase: 0.015% Triethylamine in water- Acetonitrile=83:17 ;

Flow rate: 0.8 ml/min;

Column temperature: 25 °C;

The wave length of determination: 280 nm.

[Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

[References]

- [1] Vaidya H, Goyal R K, Cheema S K. *Phytother. Res.*, 2013, 27(4):624-7.
- [2] Kwak W J, Kim J H, Ryu K H, et al. *Biol. Pharm. Bull.*, 2005, 28(4):750-3.
- [3] Bhattacharya S K, Ghosal S, Chaudhuri R K, et al. *J.Pharm.Sci.*, 1974, 63(8):1341-2.
- [4] Mansoor A, Samad A, Zaidi M I, et al. *Pharm. Pharmacol. Commun.*, 1998, 4(4): 229-30.
- [5] Liu X W, Liu S M, Wang N, et al. *N. R. R.*, 2011, 06(15):1130-5.
- [6] Mansoor A, Huda S, Mudassir A. *J.Pharm. Pharm. Sci.*, 2015, 4(4):39-42.
- [7] Wei X, He H S, Wang S, et al. *West China Journal Of Pharmaceutical Sciences*, 2006, 21(1):84-6.

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